DID SOMEBODY SAY...

SUPER COOKIE?!

drupal.org/project/supercookie

Baked fresh by user 1564666
and the team at Socha Dev (sochadev.com)

Super-evil...and super-useful:

- Sets a persistent, unique cookie and corresponding database session record within the specified expiration interval for every site visitor.

- Works regardless of user agent settings (e.g. cookies disabled, private browsing window).

- Created specifically to address the problem of tracking many anonymous users visiting a site from a single IP address (e.g. a school, corporate office).

Freedom isn't free...it costs $1.05:

> “
>
> Recently, online properties like Hulu, MSN and Flixster have been caught using a tougher version of the common cookie. These “supercookies” (aka "Flash cookies" and “zombie cookies”) serve the same purpose as regular cookies by tracking user preferences and browsing histories. Unlike their popular cousins, however, this breed is difficult to detect and subsequently remove. These cookies secretly collect user data beyond the limitations of common industry practice, and thus raise serious privacy concerns.

Less evil than it could be:

- Module only stores a hash of client and server-side variables.
- The standard Drupal pattern of using core's ip_address() function to determine visitor uniqueness is weak. Remedy: fingerprinting
- Client-side variables:

  Navigator Object: The navigator object contains information about the browser. Note: There is no public standard that applies to the navigator object, but all major browsers support it.

  Properties: appCodeName, appName, appVersion, cookieEnabled, language, onLine, platform, product, userAgent
- Server-side variables:

  REMOTE_ADDR, REMOTE_HOST, HTTP_USER_AGENT, HTTP_ACCEPT

Changing these values will invalidate all current supercookie data. Users will receive a new supercookie session when they next visit the site.

You may use the global $_supercookie object in code like this:

```
global $_supercookie;
$scid = $_supercookie->scid;
```

The scid value will be unique across all site visitors within the specified expiration interval. Your current $_supercookie->scid is 54.

Mod settings:

INTERVALS

Cookie expiration

Calendar day

All site visitors will have a unique supercookie within this interval.

Page view average

15 min

This interval represents the average page view time for users on your s
site's metrics service provider, or make a reasonable guess.

PHP	5.5.9 (more information)
PHP extensions	Enabled
PHP memory limit	128M
PHP register globals	Disabled
Supercookie	47 users are currently connected to [redacted] per the calendar day cookie expiration interval to within a 15 min page view average.

OBFUSCATION

Supercookies have been criticized as a means of silently gatherin
a hash of the user agent and server-side variables collected from
the default machine names and alias the "supercookie" path.

Cookie name - Client *

supercookie-client

Cookie name - Server *

supercookie-server

HTTP header *

X-Drupal-Supercookie

☑ Use external Javascript libraries (not recommended for production sites).

If left unchecked, you will need to download the CryptoJS.MD5 and JSON.prune scripts and save them to the sites/all/libraries directory.

Save configuration

Client-side code:

supercookie.js

```
    },
    writeCookie : function(context, settings) {

      if ($.isEmptyObject(navigator)) {
        return false;
      }
      // Loop navigator object and copy key/val pairs to $data.
      var $data = {};
      for (var $member in navigator) {
        switch (typeof navigator[$member]) {
          case 'object':
          case 'string':
          case 'boolean':
            $data[$member] = navigator[$member];
            break;

          case 'function':
            //navigator[$member]();
            break;
        }
      }

      // Do deep recursion on data collected.
      // @see https://github.com/Canop/JSON.prune
      $data = JSON.prune($data);
      // Set hash of data string.
      // @see https://code.google.com/p/crypto-js/#MD5
      $hash = CryptoJS.MD5($data);
      // Get local date/time.
      // TODO: NOTE SAFARI AND IE'S MISHANDLING OF ECMA DATE OBJECT FORMAT!!!!
      $date = new Date($.now());
      $date = $date.toLocaleString();
      $date = encodeURIComponent($date);

      // Get server response.
      $.ajax({
        type : 'GET',
        url : settings.supercookie.json_path + '?client=' + $hash + '&date=' + $date,
        beforeSend : function(xhr) {
          xhr.setRequestHeader(settings.supercookie.name_header, settings.supercookie.scid);
        },
        complete : function(xhr) {
          if (xhr.status === 200) {
            // Set client-side cookie.
            var response = JSON.parse(xhr.responseText);
            var expires = new Date(response.expires * 1000);
            document.cookie = settings.supercookie.name_client + '=""; expires=-1; path=/';
            document.cookie = settings.supercookie.name_client + '=' + response.scid + '; expires=' + expires.toGMTString() + '; path=/';
          }
        }
      });

      return false;
    }
  };

})(jQuery);
```

Server-side code:

supercookie.module

```
511
512  * Menu callback for storing data gathered client + server side.
513  */
514 function supercookie_json() {
515
516   global $_supercookie;
517
518   $args = drupal_get_query_parameters();
519
520   // Set client + server data.
521   $data = array(
522     'server' => array(
523       'REMOTE_ADDR' => ip_address(),
524       'REMOTE_HOST' => gethostbyaddr(ip_address()),
525       'HTTP_USER_AGENT' => $_SERVER['HTTP_USER_AGENT'],
526       'HTTP_ACCEPT' => $_SERVER['HTTP_ACCEPT'],
527     ),
528     'client' => $args['client'],
529   );
530
531   $hash = md5(serialize($data));
532
533   // Insert or update supercookie instance.
534   $_supercookie
535     ->match($hash)
536     ->save($args['date']);
537
538   // Flush data to client.
539   setcookie(variable_get('supercookie_name_server', 'supercookie-server'), $_supercookie->scId, $_supercookie->expires)
540   setcookie(variable_get('supercookie_name_client', 'supercookie-client'), $_supercookie->scId, $_supercookie->expires)
541   drupal_add_http_header(variable_get('supercookie_name_header', 'X-Drupal-Supercookie'), $_supercookie->scId);
542   drupal_json_output(array(
543     'scid' => $_supercookie->scId,
544     'expires' => $_supercookie->expires,
545   ));
546
547 }
548
```

Pending features:

- hook_supercookie_append() to allow dependent mods to add their own persistent values. Right now only $_supercookie->scid is stored...great for a FK value, but you've got your own great stuff to persist too.
- Setting to store full blob of collected user data to an archive table.

  EDUCATIONAL PURPOSES ONLY; ALWAYS USE YOUR POWERS FOR GOOD. THE MARKETING DEPARTMENT IS NOT GOOD. UNLESS THEY HAVE LONG DARK HAIR AND TALK SWEETLY TO YOU.

- Collect other data that Electronic Frontier Foundation has identified: http://panopticlick.eff.org (fonts, more geo stuff, etc.)
- Your ideas?? Queue them up!

Obligatory captive audience slide:

Socha Dev (sochadev.com) is hiring!!! You totally want to work here!!! Email mow.nate@sochadev.com and he'll tell you why.

Discovery Education (one of our clients) is hiring. Ideal candidate knows some Coldfusion and really wants to transition in to D7 development.

Tip Corey because he's so rad!!!